



**NOAA Teacher at Sea  
JoAnne Kronberg  
Onboard NOAA Ship RAINIER  
July 12 – 22, 2005**

**Log 1**

LOG for Tuesday, July 12

Latitude: 48.2W

Longitude: 122.46N

Wind: SW10 knots to 15-25 knots in the afternoon

Waves: 1 foot increasing to 2-4 feet

Wave Swell: 5 feet

Cloud Cover: Overcast

I was assigned to the RAINIER cruiser #5. Our mission today was to survey the water in the lanes parallel to the shore and outside the northbound commercial freight lanes. This area had been surveyed before, about 1995, but a few tugboats had questions about the depths in this area. We were told to complete as many crosslines as possible. Our map to follow was Sheet H (H11375) - Specifically Sections 27 and 28.

Before we could begin the survey, we had to put the CTD Cast in the water for about 10 minutes. This device is called the CTD because it registers the Conductivity, Temperature and Depth of the water. The computer needs this information before we can turn on the Sensor to start the charting. We traveled about 7-8 knots because the water was fairly calm. When it is rough, we can only travel about 6 knots.

Now we could start traveling in lines as the Sensor at the bottom of the ship starts sending out beams. The Sensor we use is a multi-beam model; the double beams span a 150 degrees area, but only 120 degrees range of the information is used. The information at the outside of this range is not reliable. As the ship travels, the beams ping the ocean floor and send the information to the four computer screens set up on the "dash board" of the boat. The four screens show (a) a map of our location, (b) a picture of the floor of the ocean, (c) the lines that the sensors have covered, and finally (d) the position of the Sensor on the bottom of the boat. All of this information is recorded on the computers. Then later today, a technologist will be able to print out a map and chart all the information on the map for other ships.

When we finished with our assigned mission, we still had time. So we radioed back to the RAINIER and asked for our next assignment. The ship directed us to another section, Section 24. We surveyed this Section, near Hocky Point, and then returned to the ship.

It has been a very interesting and exciting day.

JoAnne Kronberg

Teacher at Sea